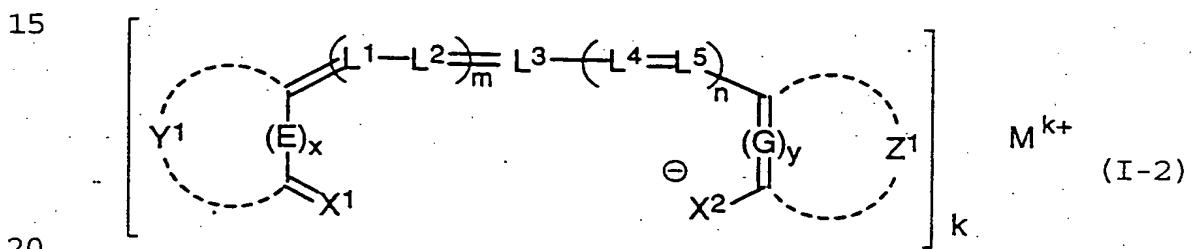
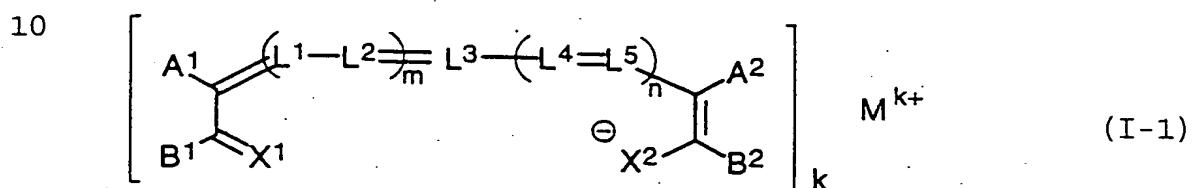


What is claimed is:

1. An information recording medium comprising a support and a recording layer provided thereon on which information can be recorded by means of a laser beam; wherein said recording layer contains a dye compound having the following formula (I-1) or (I-2):

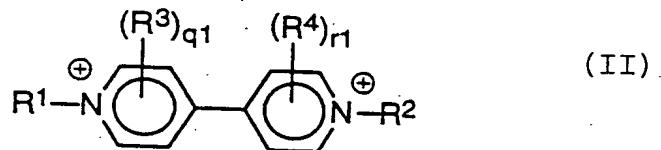


in which each of A¹, A², B¹ and B² independently represents a substituent group; each of Y¹ and Z¹ independently represents a group of atoms required for forming a carbon ring or a heterocyclic ring; each of E and G independently represents a group of atoms required for forming a conjugated double bond chain; X¹ represents =O, =NR or =C(CN)₂, wherein R is a substituent group; X² represents -O, -NR or -C(CN)₂, wherein R is a substituent group; each of L¹, L², L³, L⁴ and L⁵ independently represents a methine group which may have a substituent group; M^{k+} represents an onium ion containing a positively charged onium atom to which no hydrogen atom is attached; each of m and n independently is an integer of 0, 1 or 2; each of x and y independently is an integer of 0 or 1; and k is an integer of 1 to 10.

2. The information recording medium of claim 1, wherein M^{k+} is a quaternary ammonium ion.

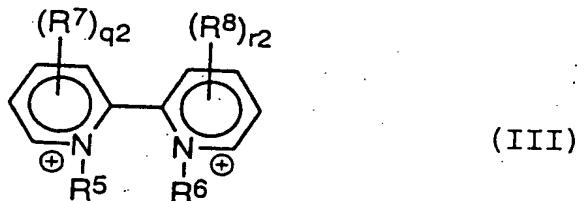
5 3. The information recording medium of claim 1, wherein k is 2.

10 4. The information recording medium of claim 1, wherein M^{k+} is an onium ion having the following formula (II):



15 in which each of R^1 and R^2 independently represents a group selected from the group consisting of an alkyl group, an alkenyl group, an alkynyl group, an aryl group or a heterocyclic group; each of R^3 and R^4 independently represents a substituent group; or each set of R^1 and R^3 , R^2 and R^4 , or R^3 and R^4 can be combined to form a ring; each of q_1 and r_1 independently is an integer of 0 to 4; provided that plural R^3 and plural R^4 are the same as or different from each other in the case that q_1 and r_1 are 2 or more, respectively.

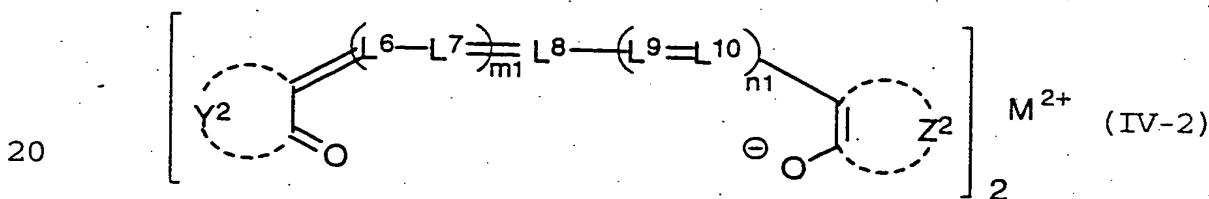
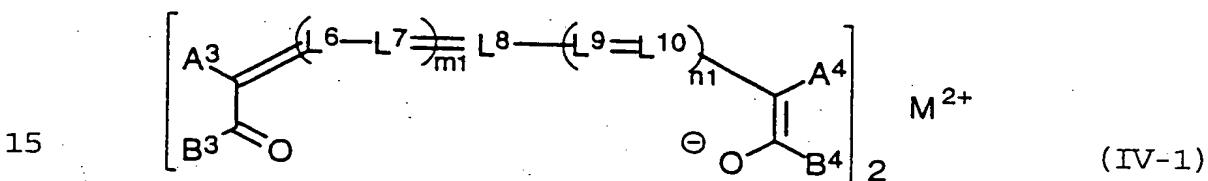
25 5. The information recording medium of claim 1, wherein M^{k+} is an onium ion having the following formula (III):



30 in which each of R^5 and R^6 independently represents a group selected from the group consisting of an alkyl group, an alkenyl group, an alkynyl group, an aryl group

and a heterocyclic group; each of R^7 and R^8 independently represents a substituent group; or each set of R^5 and R^6 , R^5 and R^7 , R^6 and R^8 , or R^7 and R^8 can be combined to form a ring; each of q_2 and r_2 independently is an integer of 0 to 4; provided that plural R^7 and plural R^8 are the same as or different from each other in the case that q_2 and r_2 are 2 or more, respectively.

6. The information recording medium of claim 1,
10 wherein the dye compound is an oxonol compound having the following formula (IV-1) or (IV-2):



in which each of A^3 , A^4 , B^3 and B^4 independently represents a substituent group selected from the group consisting of a linear, branched or cyclic alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18 carbon atoms, an aryl group having 6 to 18 carbon atoms, an aralkyl group having 7 to 18 carbon atoms, an acyl group having 2 to 18 carbon atoms, an alkylsulfonyl group having 1 to 18 carbon atoms, an arylsulfonyl group having 6 to 18 carbon atoms, an alkylsulfinyl group having 1 to 18 carbon atoms, an alkoxy carbonyl group having 2 to 18 carbon atoms, an aryloxycarbonyl group having 7 to 18 carbon atoms; an alkoxy group having 1 to 18 carbon atoms, an aryloxy group having 6 to 18 carbon atoms, an alkylthio group

having 1 to 18 carbon atoms, an arylthio group having 6 to 10 carbon atoms, an acyloxy group having 2 to 18 carbon atoms, a sulfonyloxy group, a carbamoyloxy group, an amino group, a carbamoyl group, a sulfamoyl group, a halogen atom, a hydroxyl group, a nitro group, a cyano group, a carboxyl group, and a 4- to 7-membered heterocyclic group, wherein these substituent groups may be substituted with at least one group selected from those consisting of the above-mentioned substituent groups;

10 each of Y^2 and Z^2 independently represents a group of atoms required for forming a 4- to 7-membered carbon ring or a 4- to 7-membered heterocyclic ring, which may be substituted with at least one group selected from those consisting of the substituent groups described for A^3 , A^4 ,

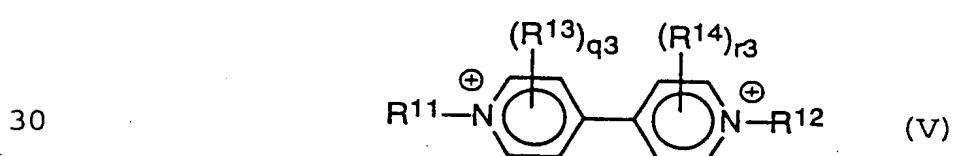
15 B^3 and B^4 and may be fused with a 4- to 7-membered carbon ring or a 4- to 7-membered heterocyclic ring;

20 each of L^6 , L^7 , L^8 , L^9 and L^{10} independently represents a methine group which may have one or two substituent groups selected from the group consisting of the substituent groups described for A^3 , A^4 , B^3 and B^4 ;

each of M^{2+} represents a quaternary ammonium ion; and

each of m_1 and n_1 independently represents an integer of 0, 1 or 2.

25 7. The information recording medium of claim 6, wherein M^{2+} is an ion having the following formula (V):



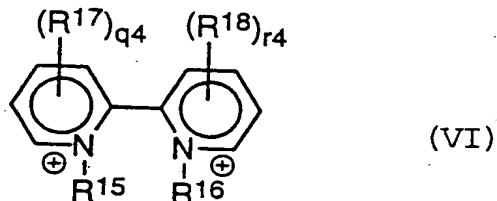
in which each of R^{11} and R^{12} independently represents a group selected from the group consisting of an alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18

carbon atoms, and an aryl group having 6 to 18 carbon atoms, wherein the alkyl, alkenyl, alkynyl and aryl group may be substituted with one or more groups selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); each of R¹³ and R¹⁴ independently represents a substituent group selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); or each set of R¹¹ and R¹³, R¹² and R¹⁴, or R¹³ and R¹⁴ can be combined to form a 4- to 7-membered ring; each of q₃ and r₃ independently is an integer of 0 to 4; provided that plural R¹³ and plural R¹⁴ are the same as or different from each other in the case that q₃ and r₃ are 2 or more, respectively.

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8. The information recording medium of claim 6, wherein M²⁺ is an ion having the following formula (VI):

20



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in which each of R¹⁵ and R¹⁶ independently represents a group selected from the group consisting of an alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18 carbon atoms, and an aryl group having 6 to 18 carbon atoms, wherein the alkyl, alkenyl, alkynyl and aryl group may be substituted with one or more groups selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); each of R¹⁷ and R¹⁸ independently represents a substituent group selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); or each set of R¹⁵ and R¹⁶, R¹⁵ and

5 R^{17} , R^{16} and R^{18} , or R^{17} and R^{18} can be combined to form a 4- to 7-membered ring; each of q_4 and r_4 independently is an integer of 0 to 4; provided that plural R^{17} and plural R^{18} are the same as or different from each other in the case that q_4 and r_4 are 2 or more, respectively.

9. The information recording medium of claim 1, wherein each of m and n is 1; m is 0, while n is 2; or m is 2, while n is 0.

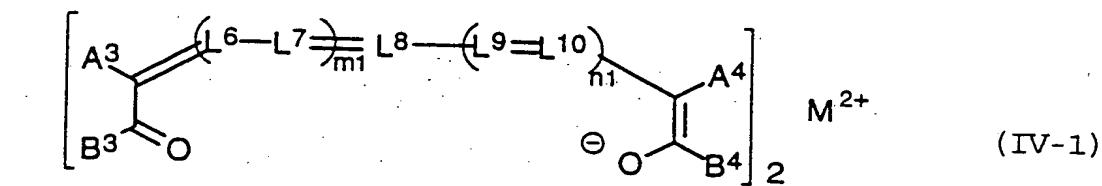
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10. The information recording medium of claim 1, wherein X^1 is $=O$ and X^2 is $-O$.

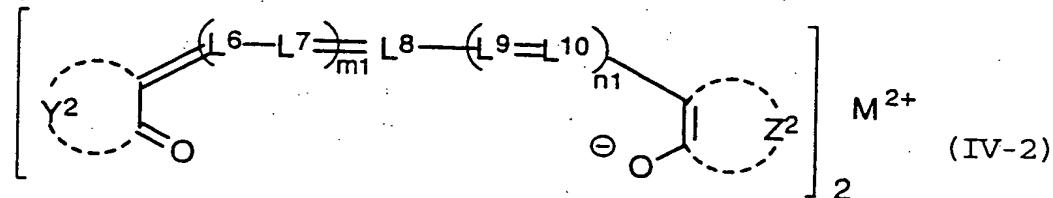
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11. The information recording medium of claim 1, wherein a light-reflecting layer is provided on the recording layer.

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35 in which each of A^3 , A^4 , B^3 and B^4 independently represents a substituent group selected from the group consisting of a linear, branched or cyclic alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon

atoms, an alkynyl group having 2 to 18 carbon atoms, an aryl group having 6 to 18 carbon atoms, an aralkyl group having 7 to 18 carbon atoms, an acyl group having 2 to 18 carbon atoms, an alkylsulfonyl group having 1 to 18 carbon atoms, an arylsulfonyl group having 6 to 18 carbon atoms, an alkylsulfinyl group having 1 to 18 carbon atoms, an alkoxy carbonyl group having 2 to 18 carbon atoms, an aryloxycarbonyl group having 7 to 18 carbon atoms; an alkoxy group having 1 to 18 carbon atoms, an aryloxy group having 6 to 18 carbon atoms, an alkylthio group having 1 to 18 carbon atoms, an arylthio group having 6 to 10 carbon atoms, an acyloxy group having 2 to 18 carbon atoms, a sulfonyloxy group, a carbamoyloxy group, an amino group, a carbamoyl group, a sulfamoyl group, a halogen atom, a hydroxyl group, a nitro group, a cyano group, a carboxyl group, and a 4- to 7-membered heterocyclic group, wherein these substituent groups may be substituted with at least one group selected from those consisting of the above-mentioned substituent groups;

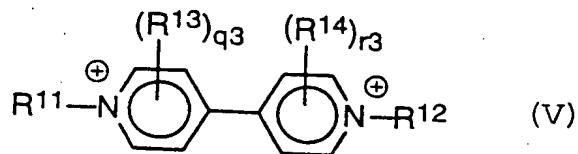
20 each of Y^2 and Z^2 independently represents a group of atoms required for forming a 4- to 7-membered carbon ring or a 4- to 7-membered heterocyclic ring, which may be substituted with at least one group selected from those consisting of the substituent groups described for A^3 , A^4 , B^3 and B^4 and may be fused with a 4- to 7-membered carbon ring or a 4- to 7-membered heterocyclic ring;

25 each of L^6 , L^7 , L^8 , L^9 and L^{10} independently represents a methine group which may have one or two substituent groups selected from the group consisting of the substituent groups described for A^3 , A^4 , B^3 and B^4 ;

30 M^{2+} represents a quaternary ammonium ion; and each of m_1 and n_1 independently represents an integer of 0, 1 or 2.

35 13. The oxonol compound of claim 12, wherein M^{2+} is an ion having the following formula (V):

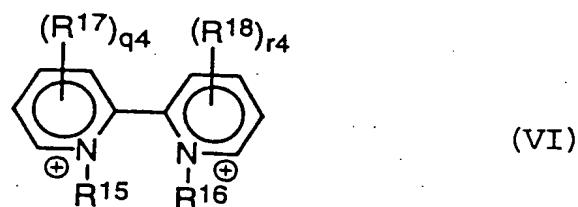
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in which each of R^{11} and R^{12} independently represents a group selected from the group consisting of an alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18 carbon atoms, and an aryl group having 6 to 18 carbon atoms, wherein the alkyl, alkenyl, alkynyl and aryl group may be substituted with one or more groups selected from the group consisting of the substituent groups described for A^3 , A^4 , B^3 and B^4 of the formulas (IV-1) or (IV-2); each of R^{13} and R^{14} independently represents a substituent group selected from the group consisting of the substituent groups described for A^3 , A^4 , B^3 and B^4 of the formulas (IV-1) or (IV-2); or each set of R^{11} and R^{13} , R^{12} and R^{14} , or R^{13} and R^{14} can be combined to form a 4- to 7-membered ring; each of q_3 and r_3 independently is an integer of 0 to 4; provided that plural R^{13} and plural R^{14} are the same as or different from each other in the case that q_3 and r_3 are 2 or more, respectively.

14. The oxonol compound of claim 12, wherein M^{2+} is an ion having the following formula (VI):

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in which each of R^{15} and R^{16} independently represents a

group selected from the group consisting of an alkyl group having 1 to 18 carbon atoms, an alkenyl group having 2 to 18 carbon atoms, an alkynyl group having 2 to 18 carbon atoms, and an aryl group having 6 to 18 carbon atoms, wherein the alkyl, alkenyl, alkynyl and aryl group may be substituted with one or more groups selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); each of R¹⁷ and R¹⁸ independently represents a substituent 5 group selected from the group consisting of the substituent groups described for A³, A⁴, B³ and B⁴ of the formulas (IV-1) or (IV-2); or each set of R¹⁵ and R¹⁶, R¹⁵ and 10 R¹⁷, R¹⁶ and R¹⁸, or R¹⁷ and R¹⁸ can be combined to form a 4- to 7-membered ring; each of q₄ and r₄ independently is an 15 integer of 0 to 4; provided that plural R¹⁷ and plural R¹⁸ are the same as or different from each other in the case that q₄ and r₄ are 2 or more, respectively.

15. The oxonol compound of claim 12, wherein each 20 of m₁ and n₁ is 1; m₁ is 0, while n₁ is 2; or m₁ is 2, while n₁ is 0.

16. The oxonol compound of claim 12, wherein each 25 of the carbon ring and the heterocyclic ring for the group of atoms represented by Y² or Z² is selected from the group consisting of pyrazolone ring, ring of thio-barbituric acid, ring of barbituric acid, indandione ring and hydroxyphenalenone ring.